

for MORE EGG PROFITS *feed* **FUL-O-PEP**



WHAT IS
FUL-O-PEP'S
NEW ELEMENT
FOR SPRING AND
HEALTH AND
PRODUCTION
THE YEAR
ROUND

ISN'T IT
WONDERFUL!
THEY CALL IT
CEREAL /
GRASS.

Where Ful-O-Pep Feeds are tested and proved



FUL-O-PEP RESEARCH FARM · Libertyville, Ill.

The Ful-O-Pep Experimental Farm at Libertyville, Illinois, is your safeguard. Here Ful-O-Pep Feeds are proved under actual farm conditions. No change is made in Ful-O-Pep Feeds until it has shown in repeated tests that it is an improvement and that it increases the feeder's profit over feed costs. The Quaker Oats Company, in Ful-O-Pep Feeds, have pioneered the use of cod liver oil, cod liver meal, molasses, whole oats feeding, granite grit feeding, and cereal grass.

We hope that you will find this book helpful. We have not attempted to cover the entire poultry industry but only those problems that we find are the most common on poultry farms. If you have any special poultry problems, we invite you to write our Poultry Service Department. We are happy to give you the benefit of our research without cost or obligation.

Just address your letter to The Quaker Oats Company, Chicago.





C. B. Schenck, Howard, Pa., can be proud of this Flock

Cereal Grass in Ful-O-Pep

NATURE'S LATEST CONTRIBUTION TO GREATER POULTRY PROFITS

ONE of the most outstanding improvements that has ever been made to Ful-O-Pep Mashers is the addition of cereal grass. It takes the place of alfalfa meal. Cereal grass unquestionably is one of nature's richest carriers of minerals and essential vitamins.

This outstanding new feed ingredient is a combination of oats, wheat, barley and rye grasses cut before they have jointed, dehydrated and then stored, awaiting their incorporation in Ful-O-Pep Mashers.

*Has Real
Nutritive
Values*

In the last few years cereal grass has attracted much attention. Its nutritive values in a mash are now quite apparent.

Cereal grass is richer in vitamin "A" or pro vitamin "A" than many cod liver oils. It is an excellent source for the vitamin "B" complex; it contains more vitamin "C" than

FUL-O-PEP IMPROVES HATCHABILITY: *"We have used your Ful-O-Pep Feeds for the past three years with satisfactory results. Your oat feeding program has been especially beneficial in giving us better hatchability from the eggs that we sell to nearby hatcheries. Ful-O-Pep feeds have been profitable to feed to our 850 layers." C. B. Schenck, Howard, Pennsylvania.*

*Rich in
Essential
Vitamins*

lemon juice and more vitamin "G" than milk. Aside from these, cereal grass contains an abundance of the so-called grass juice factor, the vitamin that has yet not been given a letter but which is particularly necessary in growing animals. It also carries vitamin "K" which is important in keeping the blood in good condition so that it will clot quickly. Except for vitamin "D", the sunshine factor, and possibly vitamin "E" it seems to have all the vitamins known.

In addition to all of these vitamins, cereal grass is several times as rich in protein as ordinary hay and materially lower in fiber. The proteins present are easily assimilated and balance out the other proteins in a feed, thus making all of the feed more readily available. There is also a liberal supply of the minerals that make for good blood.

*Chickens
Prefer
Cereal Grass*

We have known for a long time that a good pasture had no equal for feeding dairy cows. Most any animal builds up in flesh, improves in health, and increases in production on a first-class pasture. Hens that have access to a relatively good grass range the year 'round, lay more eggs and live better than hens that are confined. You cannot beat a fine green lawn in the spring, when the grass is still growing rapidly and before it is jointed, for chicks.

If your birds had access to the various kinds of young succulent grass which would they eat first? We believe you would find them preferring cereal grass such as oats, wheat, barley, or rye. We believe their second choice would be blue grass, timothy, or other quick growing grass, and next, perhaps, the legumes, clover and alfalfa. Chickens consume just lots of the rapid growing, dark green, tender grasses until they joint. When grasses joint, their food value decreases rapidly and becomes more difficult for the birds to eat.

*Cereal Grass
a Distinct
Improvement*

The cereal grass used in Ful-O-Pep Mash is grown on rich, fertile land and is cut before it joints. Just think, this grass is harvested when it is in the very pink of perfection and made available for you every day of the year.

As good as Ful-O-Pep Egg-Breeder Mash has been in the past, our tests at our research farm have proved the addition of cereal grass a distinct improvement in the feed. The birds live better, lay better, their eggs hatch better, and they use their feeds more efficiently.

We believe we have in Ful-O-Pep Egg-Breeder Mash the greatest concentration of vitamins, known and unknown, that has ever been put in an egg mash. We do not assume that we know as yet all about the different vitamins, minerals, and other food nutrients in cereal grass.



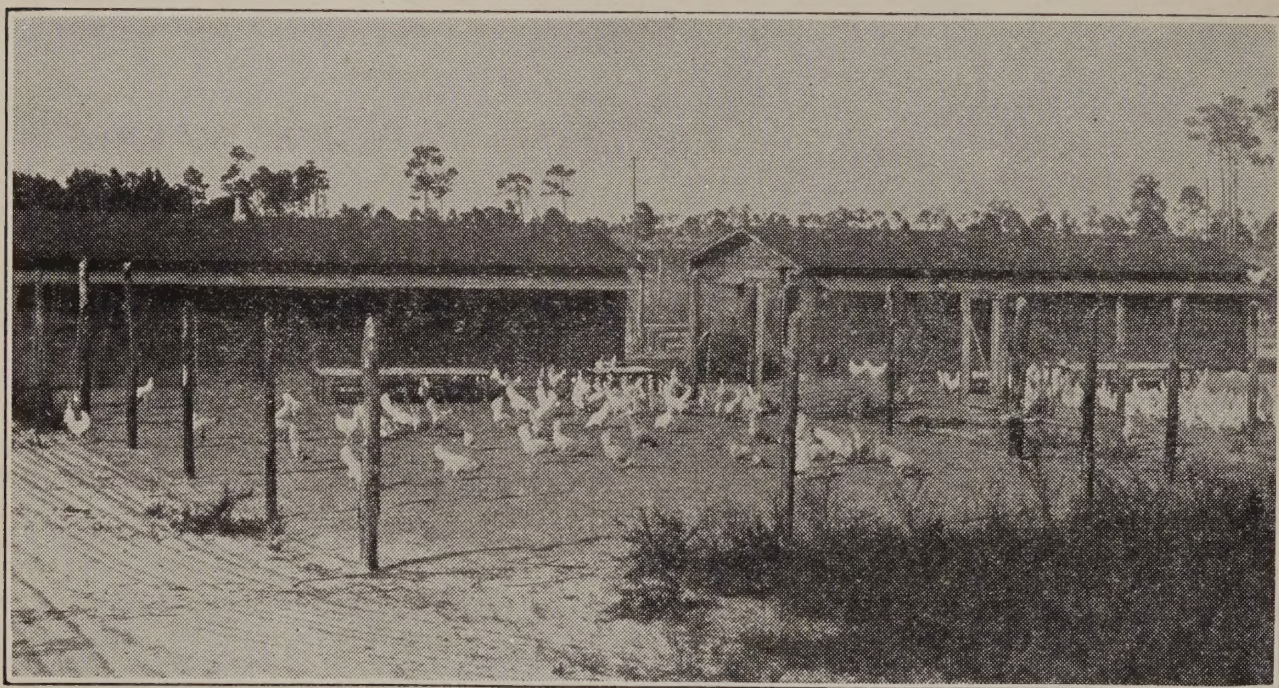
Shady Lawn Poultry Farm, Essex Junction, Vt., Feeds the Ful-O-Pep Way

By the addition of cereal grass to Ful-O-Pep Egg-Breeder Mash, we are delighted to be able to bring spring growing grass into your hen house the year 'round. We are confident that you, too, will find your hens lay more eggs, better hatching eggs, live better, have brighter combs—indicating better blood and health, increased resistance to disease, greater freedom from digestive troubles, lower feed consumption, and in turn you get a greater profit from the flock.

Ful-O-Pep Egg-Breeder Mash with its high vitamin potency, its quality of proteins, its balance, and suitability to go with heavy feeding of grain, is a most economical mash to use. We do hope that you make up your mind to feed Ful-O-Pep Egg-Breeder Mash and follow the Ful-O-Pep Feeding Program this winter. This is the economical feeding plan that thousands of successful poultrymen are using. Read about it on the following pages.

*For Economy
Feed Hens
Ful-O-Pep*

6TH YEAR ON FUL-O-PEP: "You will be interested to know that our pullets came thru the winter in fine shape. They reached 85% production in December and must have averaged close to 80% for three months. We housed 1300 pullets in July and August and have not had to cull out many. The mortality loss has been under 10. This makes the 6th year I have fed Ful-O-Pep Egg-Breeder Mash and the second winter to feed whole oats and plenty of Scratch grain. Since feeding whole oats have not had to feed wet mash. Following the Ful-O-Pep way has saved labor and cut down on feed expense." W. G. Bigelow, Shady Lawn Poultry Farm, Essex Junction, Vermont.



A Fine Flock of Leghorns, owned by Bruno Reinsch, Hollywood, Fla.

Why Ful-O-Pep is the Economical Way

THE Ful-O-Pep Plan of Feeding calls for one-third Ful-O-Pep Egg-Breeder Mash, one-third whole oats, and one-third grain. If you will set down the price of each one of these items and divide by three and compare this with the cost of another mash plus grain, fed in equal parts, and divide it by two, you then appreciate the economy of the Ful-O-Pep Feeding Plan. If you compare it with the feeding of an all-mash ration and add to it the supplements that usually go with this system, you appreciate even more the economy of the Ful-O-Pep Feeding System.

*Compare
Ful-O-Pep
with Others*

Do not, however, assume that the profit that may be made in producing a dozen of eggs depends entirely upon the cost of the feed you use — far from it. Unless you are able to maintain good production, low mortality, and realize good prices for the birds that you market and operate the plant

FUL-O-PEP GIVES EXCELLENT RESULTS: *"We have several thousand chickens which we are feeding on Ful-O-Pep exclusively. We have gotten excellent results and believe this Ful-O-Pep system of feeding to be the most common sense system on the market for getting good production, low mortality and large eggs." Bruno Reinsch, Miami, Fla.*

with a minimum of labor, you are not producing eggs most economically.

We are confident that Ful-O-Pep Egg-Breeder Mash, fed the Ful-O-Pep Way, gives you maximum production for the flock. We have had a number of poultrymen report an average of over 70% in egg production from the flock through the winter months, feeding one-third Ful-O-Pep Egg-Breeder Mash, one-third oats, and one-third Ful-O-Pep Scratch Grains. At the same time they report remarkably low mortality. The birds that did not lay and were culled out were nice plump hens which brought a good price on the market.

*Maximum
Production
on Ful-O-Pep*

A hen that drops off in egg production for one reason or another on the Ful-O-Pep Feeding Plan is usually in excellent condition to send to market. She is not thin and all broken down or worn out from excessive feeding of proteins.

Some people claim that you must feed 16 to 18% protein in order to get good egg production. We find as a result of our experimental work and observations on hundreds of farms that you get better egg production over a longer period when feeding Ful-O-Pep Egg-Breeder Mash, whole oats, and Scratch Grains in equal parts. This means that the total protein of the ration runs between 13 and 14%.

*Avoid
Excessive
Protein*

We know that all kinds of live stock stand up better, breed better, live better on not too heavy protein feeding. High protein feeding is only stimulating for a short period of time. It puts such a strain on the blood stream and on the kidneys that many of the birds are not able to "take it".

In our estimation the proper way to determine your average egg production is to divide the total number of eggs laid during the year by the number of pullets or hens that you house in the fall. When you do this we are confident that the Ful-O-Pep Feeding Plan will do the best job for you.

A good many poultrymen try to kid themselves by removing all hens just as fast as they drop off in egg production and add up their average egg production from month to month, based on hens left in the house. This is simply a good measure of your ability in weeding out the hens that are not laying. What profit is there in a flock that has averaged over 200 eggs per hen if you have culled out 60 to 70 hens out of each 100 by the end of the year?

*Profit
Depends on
Livability*

We believe that you will agree that it is more profitable to have 80 or 90 out of a hundred of your hens left in fine physical condition and laying well throughout the year. Your labor charge and your overhead cost is practically the same in either case; thus if you have only a few hens left out of



Frank Bagliani, Vineland, N. J., owns this Excellent Flock

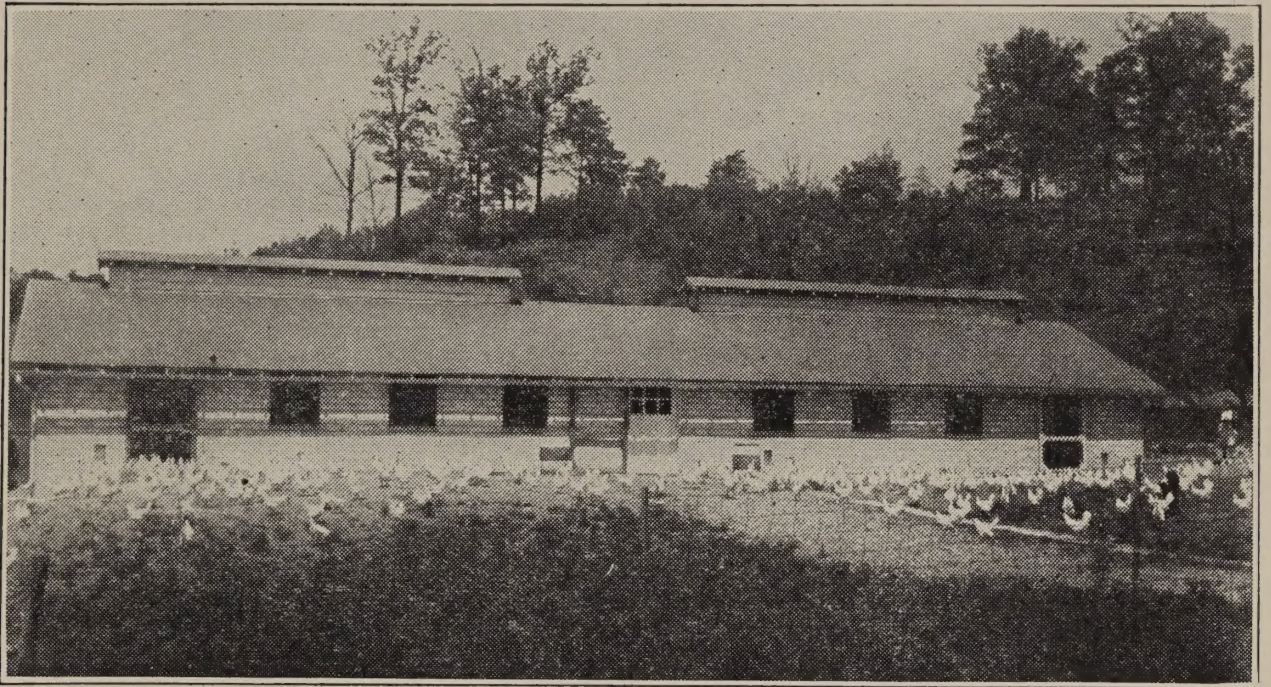
each 100 you started with in the fall, the cost of producing a dozen of eggs becomes quite high, making it unprofitable to keep chickens.

Following the Ful-O-Pep Feeding Plan, feeding one-third Ful-O-Pep Egg-Breeder Mash, one-third oats, and one-third grain, you can maintain heavy continuous production with low mortality and little culling. At the end of the laying year the birds themselves have a high market value.

Ask your neighbor who is feeding Ful-O-Pep Egg-Breeder Mash and following the Ful-O-Pep Feeding Program. Compare your costs and your profits with his. You are sure to be surprised at how much it lowers your feeding costs. Aside from producing eggs economically, you have in Ful-O-Pep Egg-Breeder Mash a feed that produce the finest quality of eggs — the kind that commonly command a premium. Join the growing ranks of Ful-O-Pep feeders today! See your dealer and start now to enjoy greater success—greater profits.

*Ful-O-Pep
Lowers
Feed Cost*

FUL-O-PEP PUT TO TEST: *"We ran a test on Ful-O-Pep and a number of other well-known commercial feeds, including one of the best known, highest priced feeds on the market. We found that the same number of birds on Ful-O-Pep consumed 8 bags of feed as compared with 11 bags of another brand of feed and that the Ful-O-Pep birds maintained the same production. As a result we now have all of our 1800 layers on Ful-O-Pep. We believe that your feeding system keeps the birds in better condition and heartily recommend Ful-O-Pep Feeds." Frank Bagliani, Vineland, N.J.*



The Poultry House on the Holmes County Hatchery Plant, Millersburg, Ohio

The Safe Way to Move Pullets

BE extremely careful in moving the pullets into winter quarters. You can practically ruin a summer's careful work of rearing by abusing the birds at this time.

In the first place, do not handle them roughly or you are apt to cause internal injuries. These do not show up until after the birds are housed for two or three weeks. The combs then shrivel or dry up and there is a gradual loss in body weight.

*Avoid
Crowding
Pullets*

A common mistake made is to crowd pullets and allow them to sweat the night they are rounded up ready to go into the laying house. We know of no better way to take weight off birds and throw them out of condition. If necessary, take several days to move them but do it carefully and

13 YEARS ON FUL-O-PEP: "For the past 13 years I have been an enthusiastic user of Ful-O-Pep Feeds. My experience with my 450 laying pullets on Ful-O-Pep Egg-Breeder Mash this past winter has been so outstanding that I feel you should know about it. My average production for five months has been 79%. The average eggs per day, 353. The average eggs per bird for five months 23.4. My mortality since these birds were housed in October will not exceed 5%. I am quite proud of this record and my birds. It certainly proves the value of Ful-O-Pep Egg-Breeder Mash and your feeding program." A. M. Nigh, Holmes Co. Hatchery, Millersburg, Ohio.

slowly. Avoid getting the birds in such a condition that they tend to take colds and kindred diseases easily.

*Grade
Pullets
Uniformly*

The more uniformly pullets are graded as to size and development when moved into winter quarters the easier it is to manage them and the more uniform results are generally obtained. Pullets that are ready to come into production are naturally strong, vigorous, and hungry. They drive the smaller, less aggressive birds away from the feed hoppers.

Use the same type of hopper equipment in the laying house that you used on the range so that the birds surely get a square meal. If you are using floor hoppers in the hen house this is not a problem but if you use table hoppers many of the pullets will starve for several days if an abrupt change in hopper equipment is made. Ordinarily in a few days they learn to climb up on the table hoppers and eat.

*See That
Pullets
Eat Grain*

If you have been feeding the grain feed on the ground while the birds were out on range, be sure to push the litter aside for a few days so the pullets won't have difficulty finding the scratch grain. Pullets that did not have to hunt for their grain previously do not know enough to scratch or hunt for it in the litter.

Birds that have been running out on a good grass range and are suddenly confined to the laying house without green stuff must be watched as they are quite apt to become constipated. If the droppings become small and hard give the flock a molasses flush. Use a pint of blackstrap molasses to sixteen quarts of water. Give this as the sole drink for one day.

*For More
Eggs Feed
Ful-O-Pep*

If you are using Ful-O-Pep Egg Breeder Mash and following the Ful-O-Pep Feeding Program for the first time, we suggest feeding two or three pounds of whole oats to 100 hens for the first week and gradually increasing it one to two pounds a week until you have them eating the proper amount of oats. Be sure that you give them the right kind of granite grit and all they need when feeding whole oats.

Birds that are fully developed and old enough, and that have been on a restricted feeding program out on the range really go after feed when they are put in the laying house. You will be amazed how quickly they jump up into heavy egg production on Ful-O-Pep Egg-Breeder Mash.

FUL-O-PEP WON OUT: *"We have fed several brands of mashes during the years devoted to the poultry business and have found that Ful-O-Pep fed the Ful-O-Pep Way gives us most gratifying results."* Charles H. Schneible, Coonrod Poultry Farm, Rome, N.Y.



A mighty Uniform Flock of Reds at Coonrod Poultry Farm, Rome, N. Y.

The Value of Whole Oats

OF all the cereal grains used in poultry feeding, oats are the most valuable. They are relatively rich in vitamin B, are one of the good sources for manganese and contain an anticannibalism factor. Oats also produce eggs of of light colored yolks and firm bodied whites that command a premium price on a quality market.

In the research work done at the Ful-O-Pep Experimental Farm and by the Ontario Agricultural Experiment Station it was found that oats produced a much better bone than corn. Oats or oatmeal produce a small, strong, hard bone while corn produces a large, soft, weak, lightweight bone. Many of us believe that when we have a grown chicken there is no change in the bone structure—like the steel in a skyscraper. Actually the bones undergo change from day to day. Hens that are laying heavily unquestionably have quite a rapid change. Unless you provide for this in the ration, the bones in time become weak and mushy. The feeding of oats helps give you proper protection under ordinary conditions.

*Oat Products
Produce
Better Bone*

Aside from the importance of sound bones we must bear in mind that the red corpuscles are formed in the marrow of the bones. Good bone assures good marrow and both are essential to good blood, while good blood is necessary to good health.

Thus to keep your hens in the best of health, you should give them a liberal supply of oatmeal and oats in their ration at all times.

*Oats Helps
Keep Hens
in Condition*

We do not know how you measure the condition of your hens. Some poultrymen weigh certain hens at regular intervals and consider that the weight, up or down, indicates condition. That can be done provided that the gain in weight is not due to fat in the abdomen. We must not make the mistake of thinking that pot-bellied hens are in good physical condition—they are not. A hen that is in first-class working condition has a full, plump, well-rounded breast and a soft, pliable, abdomen. We know of no better way of keeping meat on a chicken's breast bone than with oats or oatmeal.

*Feeding Oats
Eliminates
Wet Mash*

The most satisfactory way to feed oats is to place it in hoppers and let the hens help themselves. By keeping a hopper of oats in front of your birds, you are sure of steady feed consumption regardless of temperature and weather conditions. Hopper feeding oats also eliminates the necessity of wet mash feeding, saves labor and gives you a more steady continuous egg production plus healthier hens—hens that live and lay through two, three and even four full seasons.

The feeding of whole oats does not necessarily work with all or any mash feed. A number of poultrymen have reported that they have tried feeding oats and the birds did not eat an adequate amount of the oats; hence they did not get the results that we speak about with Ful-O-Pep Egg-Breeder Mash and oats. There is no question but that the egg mash you use is extremely important. It must be highly digestible, rich in vitamins, and a good part of the protein must come from animal origin if you are to use it with a heavy grain feeding program.

*Ful-O-Pep
Profitable
to Feed*

In building Ful-O-Pep Egg-Breeder Mash, special attention is given to these requirements. Poultrymen who have used Ful-O-Pep Egg-Breeder Mash and followed the Ful-O-Pep Way have observed a saving in their feed bill, better egg production, improved quality of eggs, better health of stock, and better hatchability of eggs. We suggest that you enjoy these advantages by starting now to use Ful-O-Pep Feeds.

LIKES THE FUL-O-PEP PROGRAM: *"We like the Ful-O-Pep program of feeding best of all. We feed all our flocks the Ful-O-Pep Egg-Breeder Mash, whole oats and mixed grains, with granite grit and oyster shell. Think this is the best way to feed laying hens in economy, low mortality, health and consistent production of large eggs. Our flocks held a uniform production all through the winter and hatchability was very satisfactory." H. H. McGrew, Superior Hatchery & Poultry Farm, Drexel, Missouri.*



These Fine White Rocks owned by Superior Hatchery, Drexel, Missouri

Produce Premium Eggs

WE believe that Ful-O-Pep eggs are the finest eggs that can be produced. Many Ful-O-Pep feeders report that they are getting a premium for their eggs and that their customers are delighted with the unusually fine flavor of Ful-O-Pep eggs.

Ful-O-Pep eggs should be good. It is our opinion that there isn't anything else that produces such fine, light colored yolks, firm thick whites, and sweet flavored eggs as oatmeal and oats. We believe that the hens eat more oatmeal and oats following the Ful-O-Pep Feeding Program than with any other feeding program. *Ful-O-Pep Produces Quality*

You, of course, must do your part to retain the original goodness of Ful-O-Pep eggs. Keep the litter clean and dry. Supply clean nests. Gather eggs at regular intervals and keep them in a cool place until they go to market.

To produce top quality eggs, keep the laying stock confined until three or four o'clock in the afternoon. Hens that run outdoors on grass all day do not lay as well, are more apt to produce dirty eggs, and tend to produce dark colored yolks.

The Ful-O-Pep Way not only produces eggs of superior quality which commonly demand a premium but actually produces them at a low feed cost—you enjoy extra profits.

Use Floor Type Feed Hoppers

*Place V
Hopper
on Floor*

MASH and oat hoppers should both be located on the floor. Putting hoppers up in the air on tables or legs is an invitation for birds on the floor to pick the feathers off the abdomen of birds at the hoppers in order to chase them away and get a chance to eat mash themselves.

We use at our Experimental Farm a V type of hopper which is about ten inches high from the floor. We find that most of the birds are able to clean out the bottom of the hopper. The height, of course, depends partly upon the style of the hopper and size of the birds.

*Face Ends
of Hoppers
to Light*

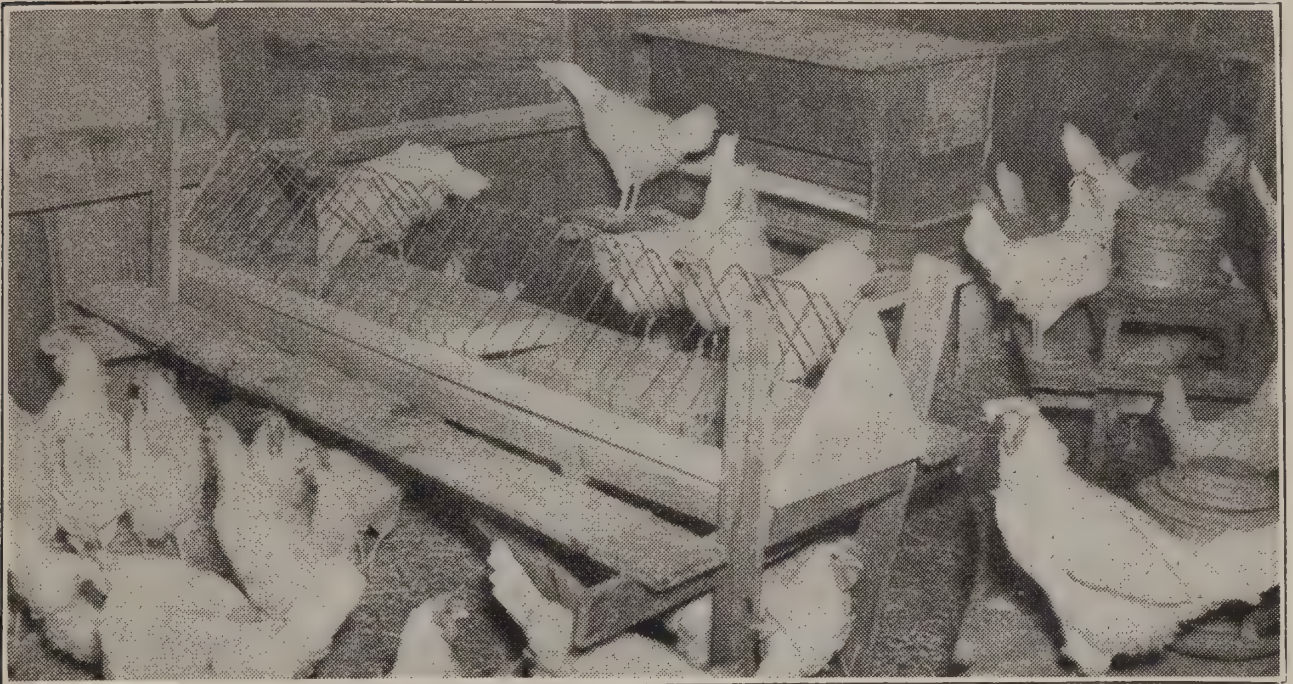
Some people think that because the hoppers are on the floor there will be more or less droppings in them. We can't see that it makes a great deal of difference. As long as the hoppers have feed in them, we do not find the birds standing very much in the hoppers, nor do we find any quantity of droppings in the feed. As a matter of fact we can't see any difference between throwing the scratch in the litter on the floor and having a few droppings fall in the mash or oat hoppers.

Have the ends of the hoppers face toward the light, the birds can see better to eat and they will ordinarily not kick litter into them. A hen always faces the light when scratching. If hoppers were put parallel with the windows in the pens, they would soon be filled with litter.

*Floor
Hoppers
Reduce Loss*

Birds are quieter and less apt to be frightened with the hoppers on the floor. It gives them a chance to see any one coming into the pen and the movement of everything around them. The amount of injury due to birds being frightened is generally not appreciated by most poultrymen. A survey in New Hampshire indicated that 40 per cent of the adult mortality came from internal injuries presumably due to fright and rough handling. Floor hoppers that are open help reduce losses in the hen house.

70% PRODUCTION ON FUL-O-PEP: "For over two years we have used Ful-O-Pep Feeds. This past year, our White Leghorn laying flock has demonstrated the value of the Ful-O-Pep Program by producing over 70% since the first of November. Good body weight and only a small death loss. No medicine needed when you feed Ful-O-Pep. The profits are your own." Silas Grinstead, Southport, Ind.



Silas Grinstead, Southport, Indiana, is Well Pleased with Ful-O-Pep

Importance of Proper Grit

THE feeding of grit, and the kind of grit that is fed is of such vital importance to the Ful-O-Pep Feeding Program that we feel it is absolutely necessary to continue to stress the economic necessity of proper grit.

Theoretically chickens do not need grit. On the same basis neither cows nor horses need teeth. You can grind the hay and grain for them, and thus keep them alive. Likewise, a hen by careful selection of her feed can get along without grit.

Chickens that do not get proper grit cannot economically handle whole oats nor grass, or other fibrous material. It is especially important that the birds get all the grit they will eat when you follow the heavy grain feeding program. Furthermore, the grit should be as large as the birds will handle.

There are a number of different kinds of grit. Some of them are soft and soluble in the presence of the hydrochloric acid of the stomach. Chickens do not seem to eat enough of other forms of grit to do a proper grinding job. Granite grit that has flecks of mica in it seems to work out most satisfactorily. The birds consume what they need of this type of grit, it grinds away slowly and is not affected by the digestive juices. Proper grit will pay for itself several times over by the saving of feed.

*Feed a
Granite
Grit*

Ful-O-Pep Egg-Breeder Mash

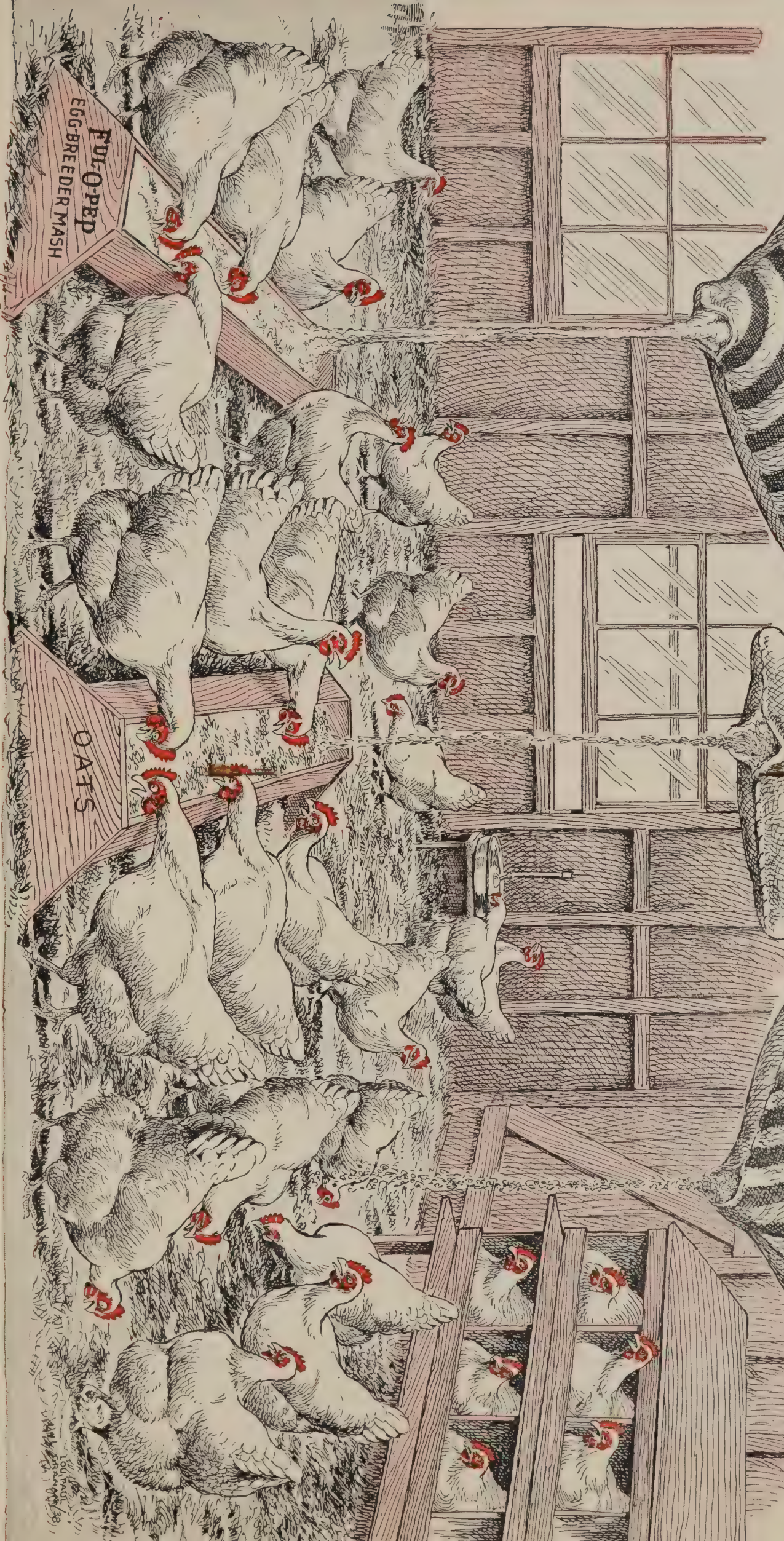
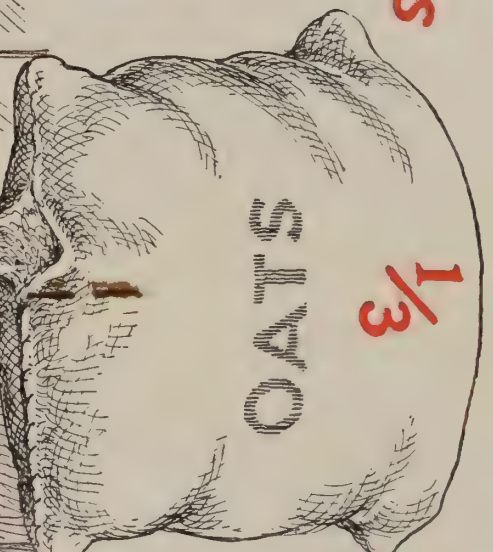
Oats

Ful-O-Pep Scratch Grains

$\frac{1}{3}$ plus

$\frac{1}{3}$

plus $\frac{1}{3}$



THE FUL-O-PEP FEEDING PLAN GETS MORE BIG EGGS AT LESS FEED COST



A Healthy, Vigorous-looking Flock, owned by Vinton Produce Co., Vinton, Iowa

Feeding for Egg Production

A GOOD hen deserves good feed, good housing, and good care in every way. If you expect your hens to lay lots of big, sound shelled eggs, you must give them access to the very things that eggs are made of, and the things that are so necessary to supply all parts of their body so as to keep them healthy and vigorous.

*Ful-O-Pep
Increases
Profits*

Many successful poultrymen are confident that Ful-O-Pep Egg-Breeder Mash is the best, most economical ration that has ever been put on the market. Many of them as you will note from the testimonials in this book, have used Ful-O-Pep Egg-Breeder Mash year after year with exceptionally fine results. We believe it will greatly increase your profits through better health, higher egg production, better egg shells, smaller egg loss, better hatches and better chicks.

100% FOR FUL-O-PEP: "Our Experimental Farm and Hatchery use Ful-O-Pep Feeds exclusively. Feeding the Ful-O-Pep Way is not only the best and cheapest but also the most natural. Ful-O-Pep grows big husky chicks, holds the body weight and holds the egg production and hatchability up. We are 100 per cent for Ful-O-Pep." Vinton Produce Co., Vinton, Iowa.

The Ful-O-Pep Way of feeding hens is extremely simple. Keep Ful-O-Pep Egg-Breeder Mash in hoppers in front of the hens at all times. Feed approximately as much oats in the morning as they will eat Egg-Breeder Mash during the day and feed approximately as much grain at night as they will consume of either oats or mash. With small birds, that would mean feeding six or seven pounds of oats in the morning and six or seven pounds of grain at night. With big birds and in heavy production, that would mean feeding nine or ten pounds of oats in the morning and nine or ten pounds of grain at night to 100 hens. With many flocks it is possible to keep the oats in hoppers all the time. Some flocks may eat oats excessively, and the morning feed of oats will then be found to be better. Be sure the hens eat approximately one-third Ful-O-Pep Egg-Breeder Mash. This is necessary to obtain the vitamins and proteins that are necessary to maintain good health and high production.

*Feed Hens
Mash, Oats
and Scratch*

If you have never fed oats previously, begin feeding them gradually. Be sure the chickens are eating an adequate amount of hard, acid insoluble, granite grit so they are capable of properly handling the oats and grain. Grit, charcoal, and oyster shells should be hopper fed and fresh water should always be available.

*Proper
Grit
Important*

The relative amounts of Ful-O-Pep Egg-Breeder Mash, Ful-O-Pep Scratch Grains, and oats to be fed will vary slightly with the different seasons of the year, and with different parts of the country. In the winter, when nights are long and cold, hens need more of the heat-forming, energy-producing grain. On the other hand, when the nights are short and warm, the hens need very little heat or energy-producing feed, in other words scratch grains.

Consequently, it is necessary in the winter where it gets cold to feed more scratch grains in comparison to whole oats and mash. In the summer or in the South, it is quite possible to feed relatively little grain and considerably more mash and oats. Actually, we figure that you will feed roughly one-third Ful-O-Pep Egg-Breeder Mash, one-third Ful-O-Pep Scratch Grains, and one-third whole oats.

*Regulate
Grain
Feeding*

The amount of oats and the amount of mash can be regulated by the amount of grain that is fed. If so much scratch is fed that some is left over in the litter all thru the day, the birds will eat relatively large quantities of scratch and relatively little Ful-O-Pep Egg-Breeder Mash or oats. Ful-O-Pep Egg-Breeder Mash is amply rich in vitamins and proteins to

give the best results on the basis of one-third Ful-O-Pep Egg-Breeder Mash, one-third oats, and one-third Ful-O-Pep Scratch Grains.

*Provide
Enough
Hoppers*

An essential part of feeding is to supply plenty of hopper space so that all the hens can eat Ful-O-Pep Egg-Breeder Mash freely. To provide the right feeding conditions for your hens, you must supply three or more running feet of open hopper space to each ten birds. If you restrict the hopper space, the weaker or less ambitious birds do not get a chance to eat as much mash or oats as they should and you do not obtain good production from the entire flock. Put the hoppers on the floor.

*Keep
Water
Available*

Chickens like fresh water. When you have an ample supply available and the climate is not too cold, supply running water. Fresh, running water requires less labor and insures birds an ample supply at all times. It tastes better and the birds drink more freely. Just because hens will drink out of a dirty pool of water, don't make your birds drink that kind of water.

During the cold weather, some type of heating device should be used if running water is not provided. A heating device saves enough pails and labor to pay most of the cost of heating. It also materially helps in keeping up uniform egg production. There are thermostatic controlled water heaters that keep the cost of heating to a minimum and maintain the water supply at an even temperature. A hen should have by weight one and a half to two times as much water as feed. Water is the cheapest food nutrient that you supply your hens.

*Hens
Need
Grit*

Grit should always be available in hoppers. Also, put granite grit in the mash hoppers when refilling with mash so as to insure the birds' having a supply available. The grit should be clean and bright so that the birds eat it readily. A gray granite with specks of mica is the best type of grit that we have found. Many kinds of grit, birds will not eat. Just having a hopper of grit in the house, regardless of whether the hens eat it or not, is not sufficient. After all the grit costs you very little and may save you many dollars in feed and hens.

A proper supply of grit materially helps increase the digestion of grain. It makes possible the economical, heavy grain feeding program that we are recommending. You cannot ex-



Sunny Lawn Egg Farm, Spring Grove, Pa., Feeds Ful-O-Pep Feeds

pect your birds to handle the amount of oats and grain recommended in the Ful-O-Pep Program, and keep in first class condition, if you do not keep your birds amply supplied with the type of grit that they desire.

Oyster shells are necessary for the formation of egg shells. If the hoppers are filled with fine shell dust, the birds will not eat them freely. It may result in weak egg shells and fewer eggs. Be sure to keep clean, coarse, bright shells before the birds.

*Avoid
Over-feeding
of Shell*

If the hens consume too much oyster shell, it may interfere with the egg production and with the hatching quality, just as a lack of shells may injure the birds. Watch your hens to see that they do not consume much over a quarter of a pound of shells per hen per month. If the birds are consuming too much shells, it may mean that you are not giving them a grit that they like to eat so are eating shells for grinding purposes as well as a source of lime for egg shells.

FED FUL-O-PEP 10 YEARS: *"We have used Ful-O-Pep Egg-Breeder Mash on this plant for the past ten years and have found that it keeps our layers in excellent health. Your present Ful-O-Pep method of feeding whole oats cuts down feed costs and at the same time increases production. We feel that the oat feeding program really is the lowest cost quality way and recommend it to our neighbors and any breeder in the poultry industry." Wm. O. Runk, Sunny Lawn Egg Farm, Spring Grove, Pennsylvania.*

*Ful-O-Pep
Lowers
Feed Cost*

Ful-O-Pep Egg-Breeder Mash carries all the supplements that we know that the birds need. We do not recommend feeding extra oil, or other animal protein material, or a wet mash, or for that matter anything else that requires extra expense or extra labor.

We are confident that Ful-O-Pep Egg-Breeder Mash and the Ful-O-Pep Feeding Program can give you more uniform production, better health in your birds, better flesh, better quality of eggs, and a distinctly lower feed cost plus requiring less labor to care for the flock.

*Earth
Supplies
Something*

When it is possible, let the birds outdoors on a grass range. It is best though not to let the birds out on range until three or four o'clock in the afternoon. That keeps the eggs clean in wet weather, and also insures against the birds' laying dark yolked eggs that are objectionable on many markets. Having the birds shut up until late afternoon, keeps them near the hoppers eating so that they can keep up in egg production. We find that letting the birds outdoors all day usually results in a lowering of 5 to 10 per cent in egg production and affects the taste of the eggs and the color of the yolks.

Hens that can get outdoors in actual contact with the ground, we find are tighter feathered, have redder combs, and are apparently healthier than if kept confined. There is no doubt that the nourishment which they obtain from green stuff plus the dirt and the bugs that they eat does keep them in better health and in better condition.

*Ful-O-Pep
Economical
to Feed*

In changing from another mash to Ful-O-Pep Egg-Breeder Mash, make the change gradually. Feed one-fourth Ful-O-Pep Egg-Breeder Mash the first week, one-half the second week, Mash the fourth week. This will help avoid any possible drop in mash consumption due to the feed being strange to the birds. Chickens judge their feed by sight rather than by taste. The reason for being so careful in changing feed is to get the birds accustomed to the difference in the appearance of the new feed. If the two feeds look alike and are of the same texture, it is quite possible to change immediately.

Ful-O-Pep Egg-Breeder Mash is not a forcing short-time mash. It should be fed for several months to appreciate its body-building, health-promoting, egg-producing qualities. Feed it according to directions. Your hens lay more eggs, larger eggs, better hatching eggs, and eggs with sounder shells. An actual test is sure to prove to you the real economy in feeding the Ful-O-Pep Way. Try it now.



Homer T. Brown, New Holland, Illinois, owns this Fine Flock

How to Handle the Breeders

THE production of good hatches and good chicks requires a combination of many things.

Let's consider what we mean by good hatches. Years ago it was considered a good hatch if fifty per cent of the eggs hatched laid by hens before they were running out on the grass, and if seventy per cent hatched when they got outdoors. This meant that the average for the year was below sixty per cent. In recent years, breeders that have carefully selected their birds on the basis of hatching quality and have operated their incubators properly have frequently been getting eighty to ninety per cent hatches of all eggs set. It is only by setting our ideal at eighty to ninety per cent hatches that we can expect to reach that goal.

*Hatchability
is Strongly
Inherited*

Since hatchability is strongly inherited, we must give great consideration to it in our breeding. We find that most of the sisters of a given family hatch very much alike. We have seen a variation of fifty to sixty per cent in hatchability in

FUL-O-PEP PROVES ECONOMICAL: *"I have fed home made and various commercial mashes and have found the Ful-O-Pep program of feeding for eggs cannot be equalled for economy, high productivity and low mortality. My records show a nice profit during three years of feeding Ful-O-Pep Egg Mash." Homer T. Brown, New Holland, Illinois.*



This Two-Story Hen House is owned by Richard J. Coldough, Denver, Colo.

two flocks that have been on the same feed and on the same feeding system. From a commercial standpoint, it is just as important to eliminate from the breeding flock the hens that are not good hatchers as it is to eliminate the hens that are poor layers. We think that any male bird used for breeding should come from a hen whose eggs hatched at least ninety per cent of all eggs set.

*Incubation
Influences
Hatchability*

If you have not been getting good hatches, we suggest that you eliminate birds that do not give a hatchability of at least seventy per cent of all eggs set. In four or five years, wonderful progress can be made in improving hatchability.

Hatchability also depends upon incubation. Many poultrymen are operating their incubators much too hot and too dry or too wet. There is a very definite ratio between temperature and humidity. We find that a temperature of 99° in a forced draft incubator gives better hatches and better chicks than higher temperatures. Too high a temperature in the machine delays hatching just as much as too low a temperature. Do

MAKES MONEY FEEDING FUL-O-PEP: *"Ful-O-Pep Mashers and the Ful-O-Pep method of feeding have made money for me. I have found it economical to feed lots of whole oats and grain with Ful-O-Pep Egg-Breeder Mash. My hens have laid over 60% since I put them in the laying house last October. They get about $\frac{1}{3}$ each Ful-O-Pep Egg-Breeder Mash, whole oats and grain." Richard J. Coldough, Denver, Colorado.*

not make the mistake of thinking that delayed hatches are necessarily due to low temperature.

Breeding and incubation, however, are not the only factors that determine hatchability. Proper feeding is equally important. Careful thought was given in formulating Ful-O-Pep Egg-Breeder Mash and in the Ful-O-Pep Feeding Plan. It is the best breeder mash we know how to make and has proved so to hundreds of successful poultrymen who have fed it according to the Ful-O-Pep Feeding Plan.

*Feeding
Equally
Important*

It is not uncommon to get 80% hatches feeding one-third Ful-O-Pep Egg-Breeder Mash, one-third Oats and one-third grain with birds that are well bred for hatchability. This seems to be particularly true of production Reds in New England.

If you are not getting an 80% or better hatch and are sure that your incubator is being properly operated, we would suggest that you decrease the oats and grain feed. Instead of the one-third, one-third, one-third, feed approximately one-quarter oats, one-quarter grain and one-half Ful-O-Pep Egg-Breeder Mash. Apparently some birds need the added vitamins supplied by the mash. We would suggest that you do this only during the breeding season. The birds are then in better health and the egg production will be as good or better on the regular feeding program the rest of the time.

*Some Birds
Need Added
Vitamins*

While on nutrition, let us suggest that you do not feed corn alone as scratch. Some birds over-eat on corn and consequently produce chicks with gizzard ulcers. We also believe that it is very much better not to feed a wet mash to breeding stock.

*Mortality
Should be
Considered*

If you are pedigree breeding, it is just as important to eliminate families in which there is high mortality as it is to eliminate families with low egg production or poor hatchability. You should strive for a family that has a remarkable ability to live, to lay, and to hatch well. When you find hens or male birds that pass these characteristics on to their offspring, use them freely.

The real advances in egg production, hatchability and mortality, apparently come through the efforts of the pedigree breeders.



A Well Grown Bunch of Broilers, Raised by Thomas McCabe, Frankford, Del.

Broilers, A Profitable Side Line

MANY poultrymen have been using their brooding equipment for raising broilers outside of the normal pullet rearing season. There is usually a comparatively good market for broilers from the first of February to the first of June or July, thus a profitable side line.

*Ful-O-Pep
Produces
Quality
Broilers*

The feeding method for raising broilers is quite different from that for raising pullets. Instead of restricting feed and feeding lots of grain, we recommend primarily mash all the way through. You find that Ful-O-Pep Broiler Mash produces exceptionally well feathered broilers with fine breast development plus extremely good yellow colored shanks. They commonly command a premium on the market.

For full feeding instructions and other helpful information on broiler raising, write now for our special folder. It's free.

FINDS FUL-O-PEP MORE PROFITABLE: "I have used your Ful-O-Pep Broiler Mash for several seasons and am delighted with the results. At last I've found a common sense way to raise broilers without spending all my profits in so called flushes. Each brood I seem to raise better broilers. In checking cost per pound there is more profit over feed cost in raising broilers the Ful-O-Pep common sense way." Thomas McCabe, Frankford, Del.



William T. Moyer, Paterson, N. J., can be proud of this Uniform Flock

How to Eliminate Tape Worms

IN THE late summer or early fall many poultrymen wake up and realize they have a lot of pullets that are heavily infested with tape worms.

A flock of pullets which are full of tapes tend to lose weight, become listless, and lose the color in the beak and shanks. You will find upon examination of droppings white jelly-like masses that crawl around on the fresh droppings. These are the segments of tape worms.

It doesn't make much difference whether the tape worms are microscopic in size or are large, they do a lot of damage. So far, no one has found any drug that can be given birds and thus completely eliminate tape worms from the flock.

*Tape Worms
do a Lot
of Damage*

Many poultrymen have approached the problem of preventing tape worm infestation from the standpoint of sanitation. They would raise their birds indoors or on clean ground. If the worm eggs are not carried from one farm to another by birds and the like, they undoubtedly could readily enough be carried by the wind. As long as there are intermediate hosts, there probably always be the problem of tape worms. Unfortunately, sanitation has not solved the problem.

We believe heavy tape worm infestation is primarily due to overfeeding. Poultrymen who feed mash all the time, espe-



These Barred Rocks owned by Edwards Poultry Farm, Toccoa, Georgia

cially a mash that contains minerals which neutralize the acid of the gizzard, are commonly troubled with tapes in the flock. The poultrymen who follow the Ful-O-Pep restricted feeding program in raising their pullets do not seem to be worried much about them.

*Increase
Acidity in
Intestines*

If tapes should appear in your flock in any quantity, we suggest feeding nothing but whole oats and grit for a week or two. Give the birds some oats in the morning and another light feeding of oats at night. Let them go hungry in the afternoon. If there is a fair range, don't feed anything at all one or two days a week. By developing a high degree of acid in the gizzard it apparently is possible to drive out tape worms.

Since tape worms so frequently follow vaccination for chicken pox, we strongly urge restricted feeding for a period of two weeks following vaccination.

Many poultrymen who have had serious trouble from tape worms on their farms year after year have found that by following the Ful-O-Pep rearing program of restricted feeding, plus the whole oats, they have effectively eliminated them.

FUL-O-PEP LOWERS FEED COST: *"It is with pleasure that I recommend your entire line of Feed as the very best I have ever used from baby chicks to the laying and breeding pens. Mortality rate is low and egg-production is good. Also your system of feeding oats materially lowers feed cost."* Edwards Poultry Farm, Toccoa, Ga.

Prevent Gizzard Ulcers

EXPERIMENT stations have recently pointed out that baby chicks may be hatched with gizzard lesions or ulcers. One of the primary reasons for these lesions or ulcers in newly hatched chicks seems to be due to the breeding stock having been fed excessively heavy on corn.

*Chicks
Hatched
with Lesions*

Actually, individual birds may be crazy enough to eat nothing but the corn in the scratch. If there are only two or three chicks out of one hundred that have lesions, we would say that the breeding stock had not necessarily been improperly fed.

The symptoms of gizzard ulcers are quite apparent. The runts or slow growing chicks that are sleepy-eyed, poorly feathered, and pot-bellied have usually developed these conditions because of gizzard ulcers. If you cut open the gizzard, wash out the contents, and let it dry, you find brown or dark spots in the gizzard lining. These spots are most commonly found near the inlet and outlet of the gizzard.

*Affected
Chicks Eat
Lots of Fiber*

Chicks that have ulcers are very much inclined to eat litter. They seem especially ravenous for sand or grit and eat almost any kind of fibrous material. When such chicks are cut open the intestines oftentimes are filled with sand or litter. The eating of excessive fiber and sand causes so much irritation that it seems to upset the nervous system. When such chicks are suddenly startled, they fall down, and are oftentimes paralyzed.

Apparently chicks affected are not able to properly digest food, especially oils and proteins. We find they are much more apt to develop rickets than do normal chicks. The poor feather growth which you find no doubt can be traced to the partial digestion of the proteins.

*Symptoms
Oftentimes
Misleading*

Many chicks with gizzard ulcers have no doubt been classified as having rickets or being crazy chicks or tremors. A simple examination of the washed out gizzard lining would quickly reveal the real trouble.

FINDS FUL-O-PEP ELIMINATES TROUBLES: "After many years in the chicken business and having had the usual troubles with pick outs, paralysis, worms, etc., I am pleased to state that Ful-O-Pep Feeds fed according to the Ful-O-Pep Feeding Program have practically eliminated these troubles. My costs to produce a dozen of eggs is lower than they were before using Ful-O-Pep and I have a decided lower laying house mortality. Ful-O-Pep Feeds are also working out splendidly with my flock of caged layers." William T. Moyer, Paterson, N.J.



This Flock under R.O.P. Supervision, Rowley Poultry Farm, Mount Morris, Pa.

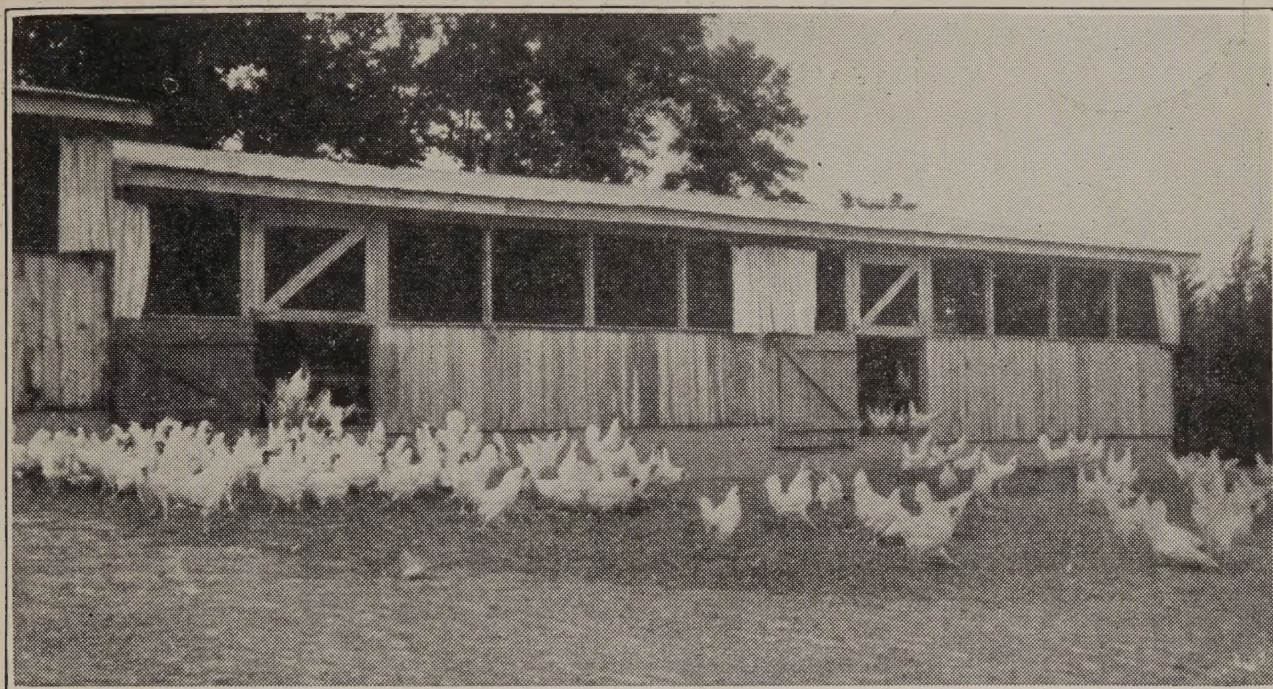
How to Avoid Cannibalism

*Excessive
Corn Causes
Cannibalism*

CHICKEN men are funny. If a dairyman had a herd that began to eat each other up and pull each other's intestines out, he would immediately take steps to correct the trouble, but there are hundreds of patient chicken men that have gone along year after year expecting to lose a lot of their hens because of cannibalism. A good many chicken men resort to some kind of a mechanical device or cut the beaks off to keep the hens from eating each other. We do not think there is any sense in either of these.

We don't understand why poultrymen are willing to go along this way when a change in feed and possibly a few minor changes in management would eliminate this trouble. Cannibalism, pick-outs, and blow-outs are largely due to excessive corn, both in the mash and in the scratch grain. Oat-

GETS GOOD PRODUCTION ON FUL-O-PEP: "The pullets shown above were housed the first of November. They were the last to come from the range and were not culled. There were 340 housed in the pen and they were banded and have been trapped under U.S. (W. Va.) R.O.P. supervision. As chicks they were fed Ful-O-Pep Starter, then Grower and later Developer on the range with whole oats. Upon housing these pullets we fed Ful-O-Pep Egg Mash." H. K. Rowley, Rowley Poultry Farm, Mount Morris, Pennsylvania.



Mrs. J. H. Hartman, Ashland, Virginia, finds Ful-O-Pep the Economical Way

meal and oats, on the other hand, carry an anti-cannibalism factor that prevents these vices.

To keep your hens from eating each other we suggest you follow these few simple rules. First, and we believe the most important, is to feed Ful-O-Pep Egg-Breeder Mash and follow the Ful-O-Pep System of feeding. Second, have the mash and oat hoppers on the floor. Table hoppers very often start cannibalism, especially if there is insufficient hopper space. Third, have the nests dark, preferably so that the entrance to the nest is in the rear. Fourth, feed the scratch grain in the litter, and don't feed more than one-third scratch grain. Fifth, feed granite grit and of a kind the birds eat freely. They should eat more grit than shell.

*Ful-O-Pep
Helps Avoid
Cannibalism*

Whether or not you are troubled from these vices, we urge you to try Ful-O-Pep Mash with their liberal oatmeal content and follow the Ful-O-Pep Plan of Feeding. It makes the poultry business a whole lot more pleasant for you as well as increases your profits. See your dealer now and start feeding the easy Ful-O-Pep Way today.

FOUND FUL-O-PEP WORTH MORE: *"This summer because of the low price of eggs we decided to try a cheaper egg mash than Ful-O-Pep. We kept a record of two rooms of identical lots of hens of 150 each. We found that the larger egg size, better shell texture, greater quantity of eggs and less hen mortality more than paid for the difference in the cost of the two feeds. From now on Ful-O-Pep is the feed for us." Mrs. J. H. Hartman, Ashland, Va.*



SEVENTH WORLD'S POULTRY CONGRESS

CLEVELAND .. OHIO ... U.S.A.



HALL OF NATIONS AND STATES

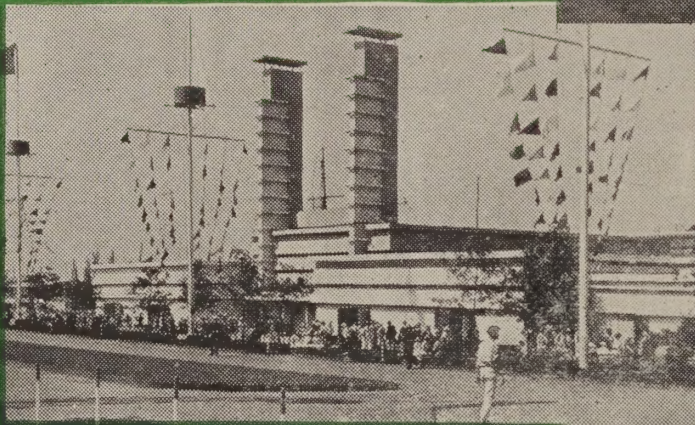
Here you will see interesting displays from abroad. At least sixty countries are expected to participate. There also will be a very complete and all-inclusive exhibit by the United States and by the States.

JULY 28 - AUG. 7 - 1939



HALL OF YOUTH — ARMORY

This building is reserved for Youth Activity of various kinds. 4H Club Members, Future Farmers of America, and other youth organizations will be well represented. Activities which would attract youth will be emphasized.



HALL OF LIVE POULTRY

The live bird exhibit no doubt will be the most complete ever assembled under one roof. You no doubt will want to spend a day or more to see this unusually fine display of birds from all corners of the globe.



HALL OF MEETING — AUDITORIUM

A mammoth program of meetings and entertainment are being arranged. Scientists, producers, hatcherymen, processors, packers, and handlers of poultry and eggs will meet here to discuss their problems.

